

What is claimed is:

1. A flat lamp comprising:

a front panel;

a rear panel, which is separated from the front panel by a predetermined
5 distance and hermetically sealed to the front panel;

a spacer, which maintains the front and rear panels separated by the
predetermined distance and secures a discharge space between the front and rear
panels;

a discharge gas, which exists in the discharge space;

10 a fluorescent layer formed on an inner surface of at least one of the front and
rear panels; and

a plurality of electrode groups formed in the rear panel, each electrode group
comprising at least three electrodes.

15 2. The flat lamp of claim 1, wherein the rear panel comprises:

a rear glass substrate, which is provided with the electrode groups;

a dielectric layer, which is formed on the rear glass substrate to cover the
electrode groups; and

a fluorescent layer formed on the dielectric layer.

20 3. The flat lamp of claim 1, wherein the front panel comprises:

a front glass substrate;

a dielectric layer, which is formed on a back surface of the front glass
substrate; and

25 a fluorescent layer formed on a back surface of the dielectric layer.

4. The flat lamp of claim 1, wherein the fluorescent layer is formed on the
inner surface of the front panel.

30 5. The flat lamp of claim 1, wherein the front panel comprises a plurality of
electrodes, and at least one of the electrodes corresponds to a single electrode
group.

6. The flat lamp of claim 5, wherein the front panel comprises:

a front glass substrate;
the plurality of electrodes, which are formed on a back surface of the front glass substrate;
a dielectric layer, which is formed on the back surface of the front glass substrate to cover the plurality of electrodes; and
a fluorescent layer, which is formed on a back surface of the dielectric layer.

7. The flat lamp of claim 5, wherein the fluorescent layer is formed on the inner surface of the front panel.

8. The flat lamp of claim 5, wherein the fluorescent layer is formed on the inner surface of the rear panel.

9. The flat lamp of claim 1, wherein the electrodes constituting each of the electrode groups are arranged in a striped pattern and have a shape selected from the group consisting of a straight line shape, a sine-wave shape, a sawtooth shape, and a square-wave shape.

10. The flat lamp of claim 1, wherein a gap between a particular electrode among the electrodes constituting each of the electrode groups and an adjacent electrode thereamong is different from a gap between all of the electrodes except for the particular electrode thereamong.

11. A flat lamp including a front panel and a rear panel, which are spaced a predetermined distance apart from each other and hermetically sealed, and a spacer, which is provided between the front panel and the rear panel to maintain the front and rear panels separated by the predetermined distance and secure a discharge space, wherein a predetermined discharge gas exists in the discharge space, and a fluorescent layer is formed on a surface of at least one of the front and rear panels, the surface being exposed to the discharge space,

the flat lamp comprising a plurality of electrodes in each of the front and rear panels, wherein the plurality of electrodes are arranged such that at least three electrodes, which are selected partially from the plurality of electrodes included in the

rear panel and partially from the plurality of electrodes included in the front panel, constitute a single electrode set.

12. The flat lamp of claim 11, wherein the single electrode set comprises at least two electrodes selected from the plurality of electrodes included in the rear panel and at least one electrode selected from the plurality of electrodes included in the front panel to correspond to the at least two electrodes.

13. The flat lamp of claim 11, wherein the single electrode set comprises at least two electrodes selected from the plurality of electrodes included in the front panel and at least one electrode selected from the plurality of electrodes included in the rear panel to correspond to the at least two electrodes.

14. The flat lamp of claim 11, wherein the rear panel comprises a rear glass substrate, a dielectric layer, and a fluorescent layer, which are sequentially stacked,

the plurality of electrodes included in the rear panel are formed on a surface of the rear glass substrate, and

the dielectric layer is formed so that the plurality of electrodes formed on the surface of the rear glass substrate are covered with the dielectric layer.

15. The flat lamp of claim 12, wherein the rear panel comprises a rear glass substrate, a dielectric layer, and a fluorescent layer, which are sequentially stacked,

the plurality of electrodes included in the rear panel are formed on a surface of the rear glass substrate, and

the dielectric layer is formed so that the plurality of electrodes formed on the surface of the rear glass substrate are covered with the dielectric layer.

16. The flat lamp of claim 13, wherein the rear panel comprises a rear glass substrate, a dielectric layer, and a fluorescent layer, which are sequentially stacked,

the plurality of electrodes included in the rear panel are formed on a surface of the rear glass substrate, and

the dielectric layer is formed so that the plurality of electrodes formed on the surface of the rear glass substrate are covered with the dielectric layer.

17. The flat lamp of claim 11, wherein the front panel comprises:

a front glass substrate;

a dielectric layer, which is formed on a back surface of the front glass substrate; and

a fluorescent layer, which is formed on a back surface of the dielectric layer, and

the plurality of electrodes included in the front panel are formed between the front glass substrate and the dielectric layer.

18. The flat lamp of claim 12, wherein the front panel comprises:

a front glass substrate;

a dielectric layer, which is formed on a back surface of the front glass substrate; and

a fluorescent layer, which is formed on a back surface of the dielectric layer, and

the plurality of electrodes included in the front panel are formed between the front glass substrate and the dielectric layer.

19. The flat lamp of claim 13, wherein the front panel comprises:

a front glass substrate;

a dielectric layer, which is formed on a back surface of the front glass substrate; and

a fluorescent layer, which is formed on a back surface of the dielectric layer, and

the plurality of electrodes included in the front panel are formed between the front glass substrate and the dielectric layer.

20. The flat lamp of claim 13, wherein the front panel comprises:

a front glass substrate; and

a dielectric layer, which is formed on a back surface of the front glass substrate, and

the plurality of electrodes included in the front panel are formed between the front glass substrate and the dielectric layer.

21. The flat lamp of claim 11, wherein the plurality of electrodes included in the front and rear panels are arranged in a striped pattern, and the plurality of electrodes included at least one of the front and rear panels have a shape selected from the group consisting of a straight line shape, a sine-wave shape, a sawtooth shape, and a square-wave shape.

22. A method of driving a flat lamp including a front panel and a rear panel, which are spaced a predetermined distance apart from each other and hermetically sealed, and a spacer, which is provided between the front panel and the rear panel to maintain the front and rear panels separated by the predetermined distance and secure a discharge space, wherein a predetermined discharge gas exists in the discharge space, a fluorescent layer is formed on an inner surface of at least one of the front and rear panels, and a plurality of electrode groups each comprising first, second, and third electrodes are provided in the rear panel, the method comprising:

(a) applying a first voltage to a first selected electrode among the first through third electrodes, taking account of a wall charge distribution and a space charge distribution, which were formed previously;

(b) applying a second voltage to a second selected electrode adjacent to the first selected electrode among the first through third electrodes, taking account of a wall charge distribution and a space charge distribution, which result from the application of the first voltage;

(c) applying a third voltage to the first selected electrode, taking account of a wall charge distribution and a space charge distribution, which result from the application of the second voltage; and

(d) applying a fourth voltage to an unselected electrode among the first through third electrodes.

23. The method of claim 22, wherein the first voltage has the same polarity as a wall charge previously induced in the first selected electrode.

24. The method of claim 23, wherein the second voltage has an opposite polarity to the first voltage.

25. The method of claim 24, wherein the third voltage has the same polarity as the second voltage.

26. The method of claim 25, wherein the fourth voltage has an opposite polarity to the third voltage.

27. The method of claim 23, wherein the first and second selected electrodes are the second and third electrodes, respectively.

28. The method of claim 23, further comprising repeating steps (a) through (d) after step (d).

29. A method of driving a flat lamp including a front panel and a rear panel, which are spaced a predetermined distance apart from each other and hermetically sealed, and a spacer, which is provided between the front panel and the rear panel to maintain the front and rear panels separated by the predetermined distance and secure a discharge space, wherein a predetermined discharge gas exists in the discharge space, a fluorescent layer is formed on an inner surface of at least one of the front and rear panels, and a plurality of electrode groups each comprising first, second, third, and fourth electrodes are provided in the rear panel, the method comprising:

(a) inducing a discharge between a first selected electrode and an adjacent second selected electrode among the first through fourth electrodes;

(b) applying a first voltage to the second selected electrode, taking account of a wall charge distribution and a space charge distribution, which result from the discharge;

(c) applying a second voltage to a third selected electrode adjacent to the second selected electrode, taking account of a wall charge distribution and a space charge distribution, which result from the application of the first voltage;

(d) applying a third voltage to an unselected electrode among the first through fourth electrodes, taking account of a wall charge distribution and a space charge distribution, which result from the application of the second voltage;

(e) applying a fourth voltage to the third selected electrode, taking account of a wall charge distribution and a space charge distribution, which result from the application of the third voltage; and

(f) applying a fifth voltage to the second selected electrode, taking account of a wall charge distribution and a space charge distribution, which result from the application of the fourth voltage.

30. The method of claim 29, wherein the first voltage has the same polarity as a wall charge induced by the discharge.

31. The method of claim 30, wherein the second voltage has an opposite polarity to the first voltage.

32. The method of claim 31, wherein the third voltage has an opposite polarity to the second voltage.

33. The method of claim 32, wherein the fourth voltage has the same polarity as the third voltage.

34. The method of claim 33, wherein the fifth voltage has an opposite polarity to the fourth voltage.

35. The method of claim 29, further comprising repeating steps (a) through (f) after step (f).

36. The method of claim 29, wherein the first through fifth voltages have the same magnitude.